Practice: 327 - Conservation Cover Scenario: #1 - Introduced Species

Scenario Description:

This practice applies on land to be retired from agricultural production and on other lands needing permanent protective cover. This practice typically involves conversion from a clean-tilled (conventional tilled) intensive cropping system to permanent non-native vegetation (scenario includes non-native grasses and legumes). The typical size of the practice is 10 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitit, and reduce air quality impacts.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Land covered with permanent non-native vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$1,640.50 Scenario Cost/Unit: \$164.05

Cost Details (by category)):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Chemical, ground application		Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.72	10	\$57.20
Fertilizer, ground application, dry bulk		Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.32	10	\$63.20
Seeding Operation, No Till/Grass Drill		No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	10	\$199.00
Materials				·		
Nitrogen (N), Ammonium Nitrate		Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.89	400	\$356.00
Phosphorus, P2O5		Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.37	500	\$185.00
Potassium, K2O		K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.32	500	\$160.00
Herbicide, Glyphosate		A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	10	\$158.30
Four Species Mix, Cool Season, Introduced Perennial (2 grasses, 2 legumes)		Cool season grass and legume mix. Includes material and shipping only.	Acre	\$46.18	10	\$461.80

Scenario: #2 - Native Species

Scenario Description:

This practice applies on land to be retired from agricultural production and on other lands needing permanent protective cover. This practice typically involves conversion from a clean-tilled (conventional tilled) intensive cropping system to permanent native vegetation (scenario includes native grass and native forb species). The typical size of the practice is 10 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitit, and reduce air quality impacts.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Land covered with permanent native vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$2,877.00 Scenario Cost/Unit: \$287.70

Cost Details (by category):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical weed control, Vegetation termination	957	Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	10	\$191.40
Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.72	20	\$114.40
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	10	\$199.00
Materials						
Three plus Species Mix, Warm Season, Native Perennial	2327	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$205.56	10	\$2,055.60
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	20	\$316.60

Practice: 327 - Conservation Cover Scenario: #3 - Native Grasses and Forbs

Scenario Description:

This practice applies on land to be retired from agricultural production and on other lands needing permanent protective cover. This practice typically involves conversion from a clean-tilled (conventional tilled) intensive cropping system to permanent native vegetation (scenario includes native grass and native forb). The typical size of the practice is 10 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitat, and reduce air quality impacts.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Land covered with permanent native vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings. Addition of forb component adds diversity and increased macroinvertebrate producion.

Scenario Feature Measure: Area Planted

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$5,262.20 Scenario Cost/Unit: \$526.22

Cost Details (by category):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	10	\$199.00
Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.72	20	\$114.40
Mechanical weed control, Vegetation termination	957	Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	10	\$191.40
Materials			·			•
One Species, Native Forb, Low/Moderate Cost	2330	Native forb. Includes material and shipping only.	Acre	\$378.10	10	\$3,781.00
One Species, Warm Season, Native Perennial Grass	2322	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$65.98	10	\$659.80
Herbicide, Glyphosate		A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	20	\$316.60

Scenario: #4 - Native Shrubs, NWSGs and Forbs

Scenario Description:

This practice applies on land to be retired from agricultural production and on other lands needing permanent protective cover. This practice typically involves conversion from a clean-tilled (conventional tilled) intensive cropping system to permanent native vegetation (scenario includes native grass, shrub, natice forb). The typical size of the practice is 10 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitit, and reduce air quality impacts.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Land covered with permanent native vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$5,002.70 Scenario Cost/Unit: \$500.27

Cost Details (by category): Price **Component Name Component Description** Unit Quantity Cost (\$/unit) Equipment/Installation Tillage, Light 945 Includes light disking (tandem) or field cultivator. Includes Acre \$10.38 10 \$103.80 equipment, power unit and labor costs. Chemical, ground application 948 Chemical application performed by ground equipment. \$5.72 20 \$114.40 Acre Includes equipment, power unit and labor costs. Mechanical weed control, 957 Mechanical operations, Includes: Roller/crimper, mower, Acre \$19.14 10 \$191.40 Vegetation termination shredder, etc. Includes equipment, power unit and labor costs. Seeding Operation, No 960 No Till drill or grass drill for seeding. Includes equipment, \$19.90 10 \$199.00 Acre power unit and labor costs. Till/Grass Drill Materials 10 One Species, Native Forb, Low 2329 Native forb. Includes material and shipping only. Acre \$173.19 \$1,731.90 Cost Three plus Species Mix, Warm 2327 Native, warm season perennial grass. Includes material Acre \$205.56 10 \$2,055.60 Season, Native Perennial and shipping only. \$290.00 Shrub, seedling or transplant, 1524 Potted shrub, 1 quart. Includes materials and shipping Each \$2.90 100 potted, 1 qt. only. Herbicide, Glyphosate 334 A broad-spectrum, non-selective systemic herbicide. Refer \$15.83 20 \$316.60 Acre to WIN-PST for product names and active ingredients. Includes materials and shipping only.

Practice: 327 - Conservation Cover Scenario: #5 - Pollinator Habitat

Scenario Description:

Permanent vegetation, including mix of native grasses, legume, forbs (mix may also include non-native species), established on any land needing permanent vegetative cover that provides habitat for pollinators. Typical practice size is variable depending on site, this scenario uses 1 ac as the typical size. In addition to providing pollinator habitat, this practice scenario may also reduce sheet and rill erosion, improve soil quality, improve water quality, and improve air quality. The practice may also provide wildlife habitat. Practice applicable on cropland, odd areas, corners, etc.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife or pollinator habitat.

After Situation:

Land covered with permanent pollinator habitat including a mix of native grasses, legume, forbs (mix may also include non-native species). This practice may also have reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for pollinator habitat may also provide cover for beneficial insects and wildlife. This scenario does not apply to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 1

Scenario Cost: \$396.14 Scenario Cost/Unit: \$396.14

Cost Details (by category)):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Acquisition of Technical Know	ledge					
Training, Workshops		Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants.	Each	\$41.42	1	\$41.42
Equipment/Installation						
Seeding Operation, No Till/Grass Drill		No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	1	\$19.90
Chemical, ground application		Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.72	2	\$11.44
Tillage, Light		Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.38	1	\$10.38
Mechanical weed control, Vegetation termination		Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	2	\$38.28
Materials						
Herbicide, Glyphosate		A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	2	\$31.66
Pollinator Mix, Native Perennial Grasses and Forbs		Native grass and legume pollinator mix. Includes material and shipping only.	Acre	\$243.06	1	\$243.06

Scenario: #6 - Organic Introduced Species

Scenario Description:

This practice applies on organically managed land needing permanent protective cover. This practice typically involves conversion from an intensive organic cropping system to permanent non-native vegetation (scenario includes non-native grass/legume mix). The typical size of the practice is 2 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitit, and reduce air quality impacts.

Before Situation:

Crops such as vegetables and small fruit crops are organically grown and harvested. Full width tillage is utilized, weeds controlled mainly by cultivation. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Organically managed land covered with permanent non-native grass/legume mix vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 2

Scenario Cost: \$396.42 Scenario Cost/Unit: \$198.21

Cost Details (by category):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Tillage, Light		Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.38	6	\$62.28
Fertilizer, ground application, dry bulk		Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.32	2	\$12.64
Mechanical weed control, Vegetation termination		Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	4	\$76.56
Seeding Operation, No Till/Grass Drill		No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	2	\$39.80
Materials	•			·	·	•
Potassium, Organic	268	ORGANIC Potassium	Pound	\$0.27	80	\$21.60
Phosphorus, Organic	267	ORGANIC Phosphorus	Pound	\$0.27	100	\$27.00
Nitrogen, Organic	266	ORGANIC Nitrogen	Pound	\$0.27	100	\$27.00
Certified Organic, Three Species Mix, Cool Season, Perennial Grasses and Legumes		Certified organic cool season perennial grass and legume mix. Includes material and shipping only.	Acre	\$64.77	2	\$129.54

Practice: 327 - Conservation Cover Scenario: #7 - Organic Native Mix

Scenario Description:

This practice applies on organically managed land needing permanent protective cover. This practice typically involves conversion from an intensive organic cropping system to permanent native vegetation (scenario includes native grass/legume mix). The typical size of the practice is 2 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitit, and reduce air quality impacts. *Certified Organic Native Seed is typically NOT available, therefore non-organic seed components were used.

Before Situation:

Crops such as vegetables and small fruit crops are organically grown and harvested. Full width tillage is utilized, weeds controlled mainly by cultivation. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Organically manage land covered with permanent native grass/legume mix vegetation has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 2

Scenario Cost: \$743.24 Scenario Cost/Unit: \$371.62

Cost Details (by category	t Details (by category):					
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	2	\$39.80
Mechanical weed control, Vegetation termination	957	Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	6	\$114.84
Tillage, Light		Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.38	6	\$62.28
Materials						
Untreated Conventional Seed, Three plus Species Mix, Warm Season Perennial Grass		Untreated conventional wWarm season perennial grass mix. May contain seed that are not available as certified organic. Includes material and shipping only.	Acre	\$263.16	2	\$526.32

Scenario: #8 - Organic Native Shrubs, NWSGs and Forbs

Scenario Description:

This practice applies on land to be retired from agricultural production and on other lands needing permanent protective cover. This practice typically involves conversion from a clean-tilled (conventional tilled) intensive cropping system to permanent native vegetation (scenario includes native grass, shrub and native forb components). The typical size of the practice is 1 acres. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality, develop wildlife habitat, and reduce air quality impacts.

Before Situation:

Crops such as corn, soybeans, or cotton are conventionally grown and harvested. Full width tillage is utilized, weeds controlled by cultivation and/or chemical application. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife habitat.

After Situation:

Land covered with permanent native vegetation (native grass, shrub and native forbs) that has reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for conservation cover may provide cover for beneficial insects and wildlife. This scenario does not apply to plantings for forage production or to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 1

Scenario Cost: \$554.67 Scenario Cost/Unit: \$554.67

Cost Details (by category):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical weed control, Vegetation termination		Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	2	\$38.28
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	1	\$19.90
Tillage, Light		Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.38	3	\$31.14
Materials						
Shrub, seedling or transplant, potted, 1 qt.		Potted shrub, 1 quart. Includes materials and shipping only.	Each	\$2.90	10	\$29.00
Untreated Conventional Seed, Three plus Species Mix, Warm Season Perennial Grass		Untreated conventional wWarm season perennial grass mix. May contain seed that are not available as certified organic. Includes material and shipping only.	Acre	\$263.16	1	\$263.16
One Species, Native Forb, Low Cost	2329	Native forb. Includes material and shipping only.	Acre	\$173.19	1	\$173.19

Scenario: #9 - Organic Pollinator Habitat

Scenario Description:

Permanent vegetation, including mix of native grasses, legume, forbs (mix may also include non-native species), established on organically managed land needing permanent vegetative cover that provides habitat for pollinators. Typical practice size is variable depending on site, this scenario uses 1 ac as the typical size. In addition to providing pollinator habitat, this practice scenario may also reduce sheet and rill erosion, improve soil quality, improve water quality, and improve air quality. The practice may also provide wildlife habitat. Practice applicable on cropland, odd areas, corners, etc. *Certified Organic Native Seed is typically NOT available, therefore non-organic seed components were used.

Before Situation:

Crops such as vegetables and small fruit crops are organically grown and harvested. Full width tillage is utilized, weeds controlled mainly by cultivation. Soil surface residue amounts average 10% or less. Soil erosion occurs with visible rills present, sediment may be moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The system provides little to no wildlife or pollinator habitat.

After Situation:

Organically managed land covered with permanent pollinator habitat including a mix of native grasses, legume, forbs (mix may also include non-native species). This practice may also have reduced soil erosion, reduced water/sediment runoff, and significant dust emissions are eliminated therefore, air quality is improved. Plants sown for pollinator habitat may also provide cover for beneficial insects and wildlife. This scenario does not apply to critical area plantings.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 1

Scenario Cost: \$392.94 Scenario Cost/Unit: \$392.94

Cost Details (by category	·):			Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Acquisition of Technical Know	ıledge					
Training, Workshops	294	Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants.	Each	\$41.42	1	\$41.42
Equipment/Installation						
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.90	1	\$19.90
Mechanical weed control, Vegetation termination	957	Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs.	Acre	\$19.14	3	\$57.42
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.38	3	\$31.14
Materials						
Untreated Conventional Seed, Pollinator Mix, Native Perennial Grasses and Forbs	2346	Untreated conventional native perennial grass and legume pollinator mix. May contain seed that are not available as certified organic. Includes material and shipping only.	Acre	\$243.06	1	\$243.06